Missouri Air:

A Quarter Century in Retrospect

Since the creation of the Missouri Department of Natural Resources' Air Pollution Control Program, the state has seen dramatic changes in its air quality. Many of the air pollution problems that once loomed over Missouri's communities are now faded memories. Some of these problems, however, will continue to challenge us into the new millennium. Randy Raymond, chief of the Air Pollution Control Program's Permitting Section, has been with the program since its creation, and recalls some of the high and low points in Missouri's air quality.

Air Quality: A Brief History

While St. Louis and Kansas City continue efforts to reduce ozone levels during hot summer months, overall air quality in these areas has improved dramatically. As recently as the mid-1970s, an area of St. Louis surrounding the I-270 loop exceeded federal standards for carbon monoxide. Another area of south St. Louis was dubbed the "hot spot," exceeding federal standards for not only ozone, but particulate matter and sulfur dioxide as well. Sulfur dioxide emissions came primarily from two industrial sources, and caused many people in the area to experience throat irritation. Some reported a taste in their mouth similar to holding a penny on the tongue. On humid days, these emissions were so severe that DNR received complaints from women who said their pantyhose were deteriorating from the air pollutants. Kansas City struggled with many of these same problems in the 1970s, being classified as a nonattainment area for both ozone and particulate matter. High levels of airborne lead also plagued many areas of Missouri. Lead production and the use of leaded fuels contributed to the prevalence of this dangerous pollutant.

Taking the Dirt Out of Our Air

Many of the problems experienced by Missouri in the 1970s were addressed by the federal Clean Air Act Amendments of 1977. New standards were established for carbon monoxide, sulfur dioxide, particulate matter, ozone and lead. The APCP began examining methods for bringing these problems under control. The state published rules creating the Prevention of Significant Deterioration permitting process to reduce particulate matter. New sulfur emissions limits were established for power plants. The EPA phased lead out of gasoline, which not only reduced airborne lead exposure, but also allowed the use of catalytic converters. Stage II Vapor Recovery Systems were implemented at gasoline stations in St. Louis to help curb ozone problems. High ozone levels in St. Louis also prompted the

area's first vehicle emissions inspection and maintenance program. Early controls were placed on charcoal kilns, although significant progress wouldn't begin until 1998.

Large changes were also made in enforcement in the last 25 years. Enforcement once consisted only of conference conciliation, persuasion and technical assistance. While the program still relies upon conference conciliation and persuasion whenever possible and continues to provide technical assistance, penalties can now be collected as well. Although penalties were not collected as recently as the mid-1980s, the APCP collected more than $500,000 in penalties in 1995 and 1998.

Attracting Environmentally Friendly Business

Throughout changes in regulations, the APCP has made special efforts to assist businesses wanting to locate in Missouri. Steps have been taken to make sure that these facilities are as clean and efficient as possible. Opening of the General Motors plant in Wentzville required diligent work between industry and program representatives. The Kingsford Charcoal facility in Belle remains one of the company's cleanest facilities in the country. In its production of charcoal, the Kingsford facility uses sawdust that might otherwise go to waste and add to air and water pollution problems. New forms of power have also come to Missouri. The opening of the Callaway Nuclear Power Plant marked a major milestone in the effort to move toward cleaner energy sources. Looking toward the future of electric power, Associated Electric has established twin natural gas-fired turbines in southeast Missouri. Review of Archer-Daniels-Midland's soybean oil extraction process of North Kansas City, Associated Electric's natural gas-fired combined cycle turbines in southeastern Missouri, and most recently the Kansas City Power and Light's coal-fired power plant in Kansas City, also set the standard for businesses nationally. Important Best Available Control Technology (BACT) analyses resulted from the review of these projects. Issuance of a BACT is the result of a major permitting effort, and is similar to adopting a regulation nationwide. When the state sets a BACT emission limit, new sources that construct anywhere in the nation must operate within that limit or justify why they cannot. Permitting of these facilities in Missouri raised the bar for similar facilities across the country.

Take a Deep Breath

The state still has much work to do. Charcoal kilns have only recently come under regulation, and St. Louis continues to fight its ozone problem. However, Missouri has cleaned up high levels of carbon monoxide and sulfur dioxide. Kansas City is no longer a nonattainment area for ozone. Significant reductions have been made in airborne lead, although exceedances of the lead standard are still monitored near the lead smelter in Herculaneum. Providing clean air is an important goal for Missouri. Not only does it improve the quality of life for Missouri residents, but it also encourages economic development. It is much easier for a state to attract high-paying, high-technology companies when the quality of the state's environment is the very best available.

Missouri Air Quality History

1970: Congress passes Clean Air Act; authorizes the EPA to establish national air quality standards.

1977: Federal government adopts 1977 Clean Air Act Amendments; areas with serious air quality problems are given more time to comply with standards.

1984: State implements first automobile emissions inspection program in St. Louis.

1989: Stage II Vapor Recovery System adopted for St. Louis; gas nozzles re-designed to catch gasoline vapors.

1990: Federal government adopts 1990 Clean Air Act Amendments, which improve enforcement and permitting programs and take significant steps toward reducing urban smog, acid rain and toxic air emissions.

1992: Kansas City attains federal standard for ozone.

1994: Missouri General Assembly passes bill establishing enhanced automobile emissions inspection program for St. Louis area.

1997: The EPA establishes new health-based standards for ground-level ozone and particulate matter.

1998: Missouri Air Conservation Commission adopts regulation to phase-in control of charcoal kiln emissions.

1999: Missouri Air Conservation Commission adopts amendments to odor regulations for Class 1A Concentrated Animal Feeding Operations. Federal RFG is introduced in St. Louis.